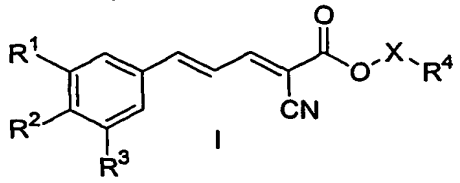
Claims:

1. A compound of Formula I, or a salt, solvate, or hydrate thereof



I

wherein

R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylCO_2, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), C_{1-6}alkyl(C=O)NH, C_{1-6}alkyl(C=O)N(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3 and halo;

R^4 is unsubstituted Ar, or Ar substituted with 1-4 substituents, independently selected from C_{1-6}alkyl, C_{1-6}alkoxy, and halo;

X is selected from $(CH_2CH_2O)_n$ and $(CH_2)_n$, and

n = 1-4.

2. The compound according to claim 1, wherein

R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-4}alkyl, C_{1-4}alkoxy, C_{1-4}alkylCO_2, NH_2, NH-C_{1-4}alkyl, N(C_{1-4}alkyl)(C_{1-4}alkyl), C_{1-4}alkyl(C=O)NH, C_{1-4}alkyl(C=O)N(C_{1-4}alkyl), NO_2, CF_3, OCF_3, and halo;

R^4 is C_{1-6}alkyl,

X is $(CH_2CH_2O)_n$, and

n = 1-4.

3. The compound according to claim 1 or 2, wherein R^1, R^2, and R^3 are each independently selected from H, OH, C_{1-4}alkyl, C_{1-4}alkoxy, C_{1-4}alkyl(CO)O, NH_2, NH-C_{1-4}alkyl, N(C_{1-4}alkyl)(C_{1-4}alkyl), C_{1-4}alkyl(C=O)NH, C_{1-4}alkyl(C=O)N(C_{1-4}alkyl), NO_2, CF_3, OCF_3, and halo.

4. The compound according to claim 3, wherein R^1, R^2 and R^3 are each independently selected from H, OH, OCH_3, CH_3CO_2, NH_2, $N(CH_3)_2$, CH_3CONH, and NO_2.

5. The compound according to claim 4, wherein R^1, R^2, and R^3 are each independently selected from H, OH, and OCH_3.

6. The compound according to claim 1, wherein R^4 is unsubstituted Ar.

7. The compound according to claim 6, wherein R^4 is phenyl.

8. The compound according to claim 2, wherein R^4 is methyl or ethyl.

9. The compound according to claim 8, wherein R^4 is methyl.

10. The compound according to claim 9, wherein n is 2-3.

11. The compound according to claim 10, wherein n is 3.

12. A compound selected from:

2-Cyano-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-38)

2-Cyano-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-39)

2-Cyano-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienoic acid 2-[2-(2-methoxyethoxy)ethoxy] ethyl ester (CRIV-42)

2-Cyano-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienoic acid 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (CRIV-46); and

2-Cyano-5-(4-hydroxy-3-methoxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-79).

13. A composition comprising a compound according to any one of claims 1 to 12 in admixture with a pharmaceutically acceptable diluent or carrier.

14. A use of a compound according to any of claims 1-12, and/or a composition according to claim 13, to prepare a medicament to modulate cell proliferation.

15. The use according to claim 14, for inhibiting cell proliferation.

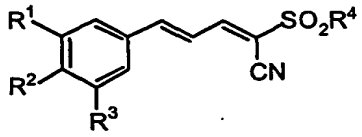
16. The use according to claim 15, wherein the cell is a malignant hematopoietic cell.

17. A method of modulating cell proliferation comprising administering an effective amount of a compound according to any of claims 1-12, and/or a composition according to claim 13, to a cell or animal in need thereof.

18. The method according to claim 17, for inhibiting cell proliferation.

19. The method according to claim 18 wherein the cell is a malignant hematopoietic cell.

20. A compound of Formula III, or a salt, solvate, or hydrate thereof:



III

wherein

R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylCO_2, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), C_{1-6}alkyl(C=O)NH, C_{1-6}alkyl(C=O)N(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3, and halo; and

R^4 is selected from C_{1-6}alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6}alkyl, C_{1-6}alkoxy and halo, with the provisos that when R^1 and R^3 are both H and R^4 is unsubstituted phenyl, R^2 is not H, Cl, or OCH_3; when R^1 and R^2 are both H and R^4 is unsubstituted phenyl, R^3 is not NO_2; and when R^1 and R^3 are both H and R^4 is CH_3, R^2 is not $N(CH_3)_2$.

21. The compound according to claim 1, wherein R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-4}alkyl, C_{1-4}alkoxy, C_{1-4}alkylCO_2, NH_2, NH-C_{1-4}alkyl, N(C_{1-4}alkyl)(C_{1-4}alkyl), C_{1-4}alkyl(C=O)NH, C_{1-4}alkyl(C=O)N(C_{1-4}alkyl), NO_2, CF_3, OCF_3, and halo.

22. The compound according to claim 21, R^1, R^2 and R^3 are each independently selected from H, OH, OCH_3, CH_3CO_2, NH_2, $N(CH_3)_2$, CH_3CONH, and NO_2.

23. The compound according to claim 20, wherein R^4 is selected from C_{1-4}alkyl, phenyl, and pyridyl.

24. The compound according to claim 23, wherein R^4 is selected from CH_3 and phenyl.

25. The compound according to claim 24, wherein R^4 is unsubstituted phenyl.

26. The compound according to claim 20, wherein phenyl and pyridyl are unsubstituted or substituted with 1-3 substituents, independently selected from C_{1-4}alkyl, C_{1-4}alkoxy, and halo.

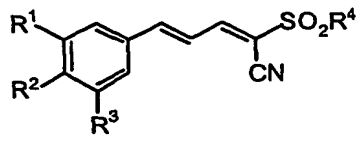
27. The compound according to claim 24, wherein phenyl is unsubstituted or substituted with 1-2 substituents, independently selected from C_{1-4}alkyl, C_{1-4}alkoxy, and halo.

28. The compound according to claim 20, wherein at least one of R^1, R^2 and R^3 is OH while R^4 is selected from unsubstituted phenyl and phenyl substituted with 1-4 substituents, independently selected from C_{1-6}alkyl, C_{1-6}alkoxy, and halo.

29. A compound selected from:
2-Benzenesulfonyl-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-33),
2-Benzenesulfonyl-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-34),
2-Benzenesulfonyl-5-(4-nitrophenyl)-penta-2E,4E-dienenitrile (CRVIII-35),
5-(4-Acetoxy-3-methoxyphenyl)-2-benzenesulfonyl-penta-2E,4E-dienenitrile (CRVIII-49)
5-(3,4-Dihydroxyphenyl)-2-(pyridine-2-sulfonyl)-penta-2E,4E-dienenitrile (CRVIII-50),
2-(4-Chlorobenzenesulfonyl)-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-51),
5-(3,4-Dihydroxyphenyl)-2-(toluene-4-sulfonyl)-penta-2E,4E-dienenitrile (CRVIII-52), and
5-(3,4-Dihydroxyphenyl)-2-methanesulfonyl-penta-2E,4E-dienenitrile (CRVIII-53).

30. A composition comprising a compound according to any one of claims 20 to 29 in admixture with a pharmaceutically acceptable diluent or carrier.

31. A composition comprising, in admixture with a pharmaceutically acceptable diluent or carrier, a compound of Formula IV, or a salt, solvate, or hydrate thereof



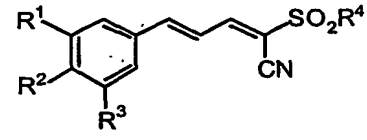
IV

wherein

R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylCO_2, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), C_{1-6}alkyl(C=O)NH, C_{1-6}alkyl(C=O)N(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3, and halo; and

R^4 is selected from C_{1-6}alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6}alkyl, C_{1-6}alkoxy, and halo.

32. A use to prepare a medicament to modulate cell proliferation of a composition according to claim 30 or 31, and/or a compound capable of modulating cell proliferation of Formula IV, and/or a salt, solvate or hydrate thereof:



IV

wherein

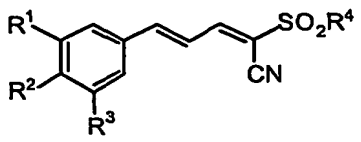
R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylCO_2, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), C_{1-6}alkyl(C=O)NH, C_{1-6}alkyl(C=O)N(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3, and halo; and

R^4 is selected from C_{1-6}alkyl, phenyl, and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6}alkyl, C_{1-6}alkoxy, and halo.

33. The use according to claim 13, for inhibiting cell proliferation.

34. The use according to claim 14 wherein the cell is a malignant hematopoietic cell.

35. A method of modulating cell proliferation comprising administering to a cell or animal in need thereof an effective amount of a composition according to any of claims 30 and 31, and/or a compound capable of modulating cell proliferation of Formula IV, or a salt, solvate or hydrate thereof:



IV

wherein

R^1, R^2 and R^3 are each independently selected from H, OH, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkylCO_2, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), C_{1-6}alkyl(C=O)NH, C_{1-6}alkyl(C=O)N(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3, and halo; and

R^4 is selected from C_{1-6}alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from C_{1-6}alkyl, C_{1-6}alkoxy, and halo.

36. The method according to claim 35, for inhibiting cell proliferation.

37. The method according to claim 36, wherein the cell is a malignant hematopoietic cell.